

CORRECTION TO “LATE SUMMER FOG USE IN THE DROUGHT DECIDUOUS SHRUB, *ARTEMISIA CALIFORNICA* (ASTERACEAE)”

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Due to a computational error while correcting plant water isotope samples for soil water evaporative fractionation, the results presented in Figures 2 and 3 are incorrect.

After correcting the computational error, an improved analysis of the plant water isotopes was conducted using a MixSIAR Bayesian mixing model v3.1 in R (Stock and Semmens 2013). The Markov Chain Monte Carlo chain length was 100,000 generations with a burn-in of 50,000 generations. This is a more robust method to determine proportional water use in plants than the method used in the original paper (Phillips and Gregg 2001).

Following the computational correction and improved data analysis, the isotope results in Figures 2 and 3 have changed. Plant water isotopes are now more depleted in the hydrogen and oxygen isotope than the water sources (corrected Fig. 2). It now appears that *Artemisia californica* Less. does not rely on fog water in the late summer months (corrected Fig. 3).

While the isotopic results imply no direct uptake of fog, the increased water content in *A. californica* for October 2011 (Fig. 4, not shown), suggests that fog may reduce evapotranspiration allowing shrubs to rehydrate from groundwater sources in the late

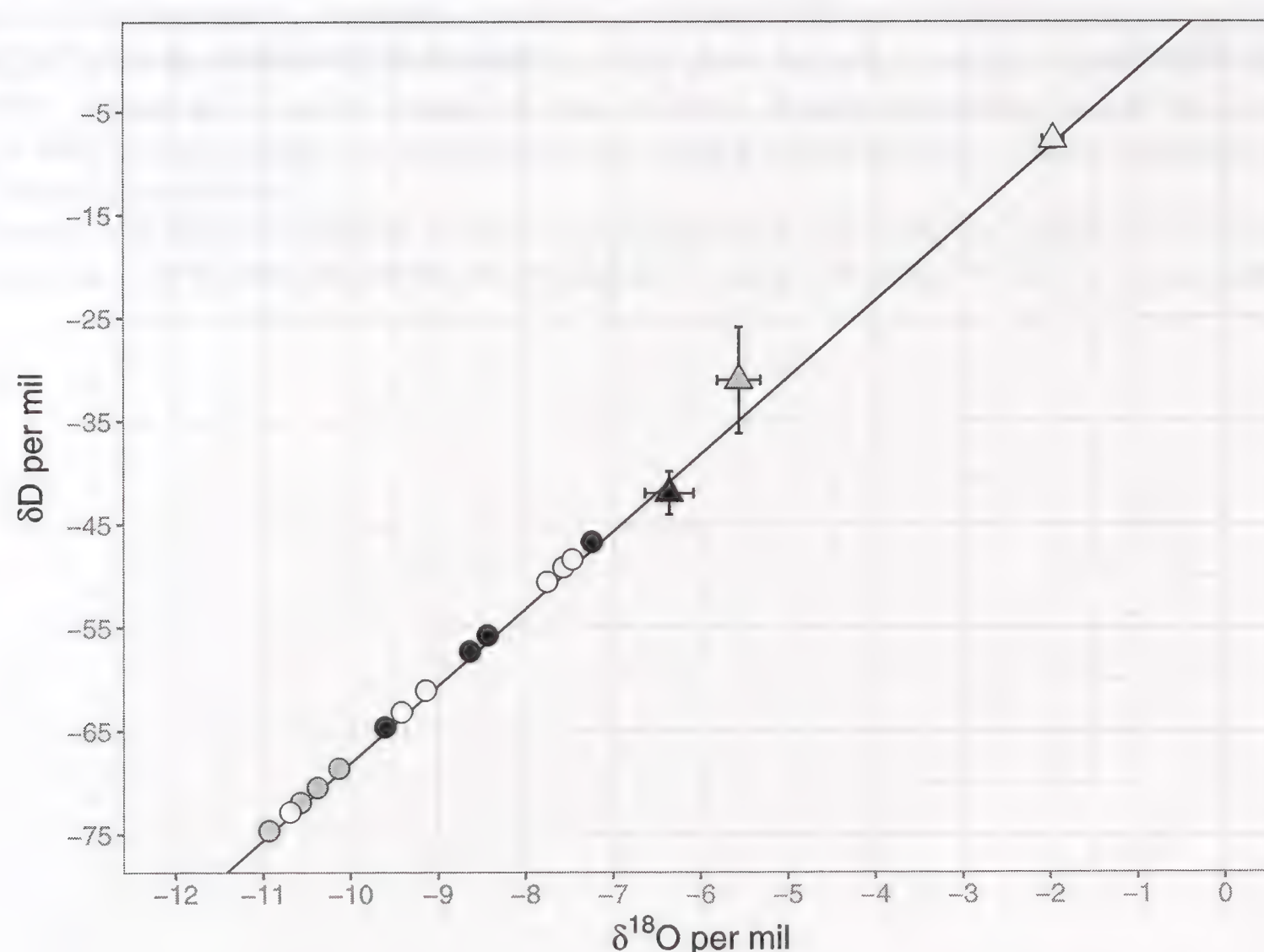


FIG. 2. The isotopic signatures of water and *Artemisia californica* stem tissue at Coal Oil Point Reserve. Fog is isotopically enriched in the hydrogen and oxygen isotopes (white triangle). Rain and groundwater are depleted (gray and black triangle, respectively). Plant water samples from July (black circles), August (gray circles), and September (white circles) were corrected to the local meteoric water line (black line). Error bars are the standard error associated with source water isotopic values.

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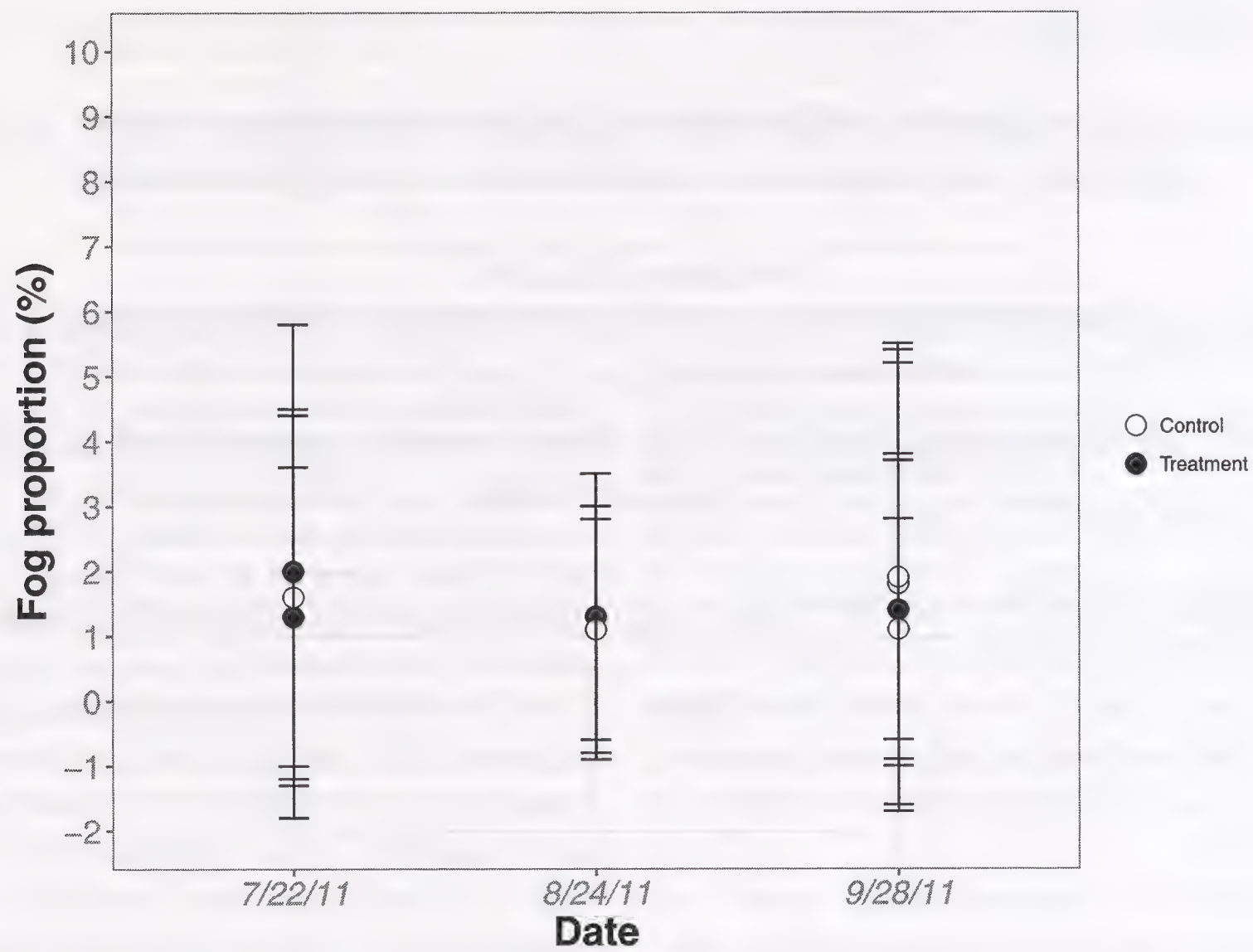


FIG. 3. Hierarchical Bayesian mixing model results for fog proportion in stem water for 2011. Each point is an individual plant (white for control, black for treatment) with the mean and standard deviation of fog proportion according to the model.

summer. However, it is possible that *A. californica* can take in fog water through their leaves, but by sampling stem tissue infrequently, evidence of this process remains lacking. Overall, this study suggests that fog effects on *A. californica* are likely temporary and could ameliorate summer drought conditions in coastal Southern California.

LITERATURE CITED

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